

**Testimony of the Electric Power Supply Association
Regarding the Energy Infrastructure Act
U.S. Senate Energy and Natural Resources Committee
June 24, 2021**

The Electric Power Supply Association (“EPSA”) and its members thank you for holding today’s hearing to discuss the Energy Infrastructure Act (“discussion draft” or “bill”). We appreciate the Committee’s continued efforts to produce bipartisan legislation designed to ensure Americans continue to receive affordable and reliable energy. Overall, the discussion draft is a positive step and will facilitate much-needed investment in America’s aging energy infrastructure. We applaud the Committee for working in a bipartisan manner to produce a strong piece of draft legislation.

Our testimony is strictly limited to Section 3203 of the discussion draft, the civil nuclear credit program. Section 3203 would provide a four-year credit to eligible nuclear reactors located in competitive electricity markets that would otherwise close due to “economic factors” and whose closure would result in an increase in air pollution. The program would cost \$1.2 billion per year from 2022 through 2026. We believe such a program is unnecessary; America’s merchant nuclear fleet is profitable. If the Committee decides to pursue such a program, we urge additional protections to ensure taxpayer dollars, intended to financially rescue specific resources, are not provided to already profitable ones.

EPSA members own and operate nearly 150,000 MW of electric generation capacity all around the country, produced from all fuel sources, including nuclear. We are not anti-nuclear and believe nuclear energy is part of a low-cost decarbonization strategy. Since our inception, we have been proponents of well-designed, technology-neutral competitive electricity markets that allow all resources to compete to meet consumer demands reliably at the lowest cost. Competitive electricity markets have delivered substantial consumer benefits, including cost reductions and lower carbon emissions, all while maintaining reliability.

Today, EPSA members are investing in wind, solar, and world-leading energy storage projects to provide the clean energy American consumers increasingly demand—all without a mandate. Unfortunately, a program like the one proposed here, would dampen the necessary price signals for continued private investment in these new, clean technologies. Section 3203 is antithetical to competitive markets, and we urge Congress to pursue a different path. We recognize comprehensive climate policy, such as a carbon price or a well-designed clean energy standard may be politically difficult today, but instead of subsidizing profitable nuclear power plants, we urge Congress focus on maximizing the incentive for private investment in the clean technologies necessary for tomorrow’s grid. The discussion draft largely does just that, but Section 3203 misses the mark.

America’s Nuclear Reactors Do Not Need a Bailout

PJM Interconnection (“PJM”) is the nation’s largest competitive electricity market, providing electricity to over 65 million people. There are sixteen nuclear power plants in PJM representing over 32,000 MW of installed capacity.¹ Each year, the Independent Market Monitor

¹ <https://www.pjm.com/-/media/markets-ops/ops-analysis/capacity-by-fuel-type-2021.ashx>

(“IMM”) for PJM, the market’s watchdog, performs an assessment which includes an evaluation of market performance and recommendations for market design changes, among other things. Also included in that report is an analysis of the expected profitability of the nuclear resources in PJM based on market revenues and estimated costs. In a very recent report dated May 13, 2021, the IMM shows the expected profitability of nuclear resources in PJM. As you can see in the table below, all but three nuclear resources are expected to be profitable in 2021, some to the tune of hundreds of millions of dollars. The most profitable resource is expected to earn nearly \$280 million in 2021.

Table 7-22 Nuclear unit forward annual surplus (shortfall)^{59 60}

	ICAP (MW)	Surplus (Shortfall)	Subsidy	Surplus (Shortfall)	Surplus (Shortfall)
		(\$/MWh)	(\$/MWh)	Excluding Subsidy (\$ in millions)	Including Subsidy (\$ in millions)
		2021	2021	2021	2021
Beaver Valley	1,808	\$3.71		\$56.1	\$56.1
Braidwood	2,337	\$4.82		\$93.6	\$93.6
Byron	2,300	\$4.04		\$77.5	\$77.5
Calvert Cliffs	1,708	\$5.79		\$81.9	\$81.9
Davis Besse	894	(\$5.19)		(\$37.0)	(\$37.0)
Dresden	1,797	\$5.62		\$83.7	\$83.7
Hope Creek	1,172	\$3.46	\$10.00	\$33.9	\$129.3
LaSalle	2,271	\$4.68		\$88.3	\$88.3
Limerick	2,242	\$3.11		\$58.5	\$58.5
North Anna	1,892	\$4.81		\$75.5	\$75.5
Peach Bottom	2,347	\$2.96		\$58.3	\$58.3
Perry	1,240	(\$5.16)		(\$51.1)	(\$51.1)
Quad Cities	1,819	\$2.28	\$16.50	\$35.1	\$279.4
Salem	2,328	\$3.15	\$10.00	\$61.5	\$251.0
Surry	1,676	\$4.25		\$59.3	\$59.3
Susquehanna	2,520	(\$0.56)		(\$9.8)	(\$9.8)

Source: Monitoring Analytics

As noted in the table, several nuclear resources in PJM—the most profitable ones—are already receiving Zero Emission Credits (“ZECs”) or other similar credits through state-level programs in Illinois and New Jersey. The IMM goes further to find that no nuclear resources are at-risk of retirement in the PJM region.² Therefore, a federal program to provide subsidies to existing nuclear reactors given their historical and expected profitability does not appear necessary.

However, should the Committee pursue such a program, at a minimum, the program should expressly prohibit entities receiving a state-level ZEC or similar nuclear credit from also receiving a federal credit such as the one proposed in Section 3203. As noted above, the most profitable nuclear resources in PJM are those receiving a state-level subsidy, further eliminating any need for a federal credit. There are currently eight nuclear resources across four states receiving a state-level credit.³ Proposed legislative text is below:

Sec. 3203 (b)(2)(A)(ii)(I): PROHIBITION ON DUPLICATIVE CREDITS

Any nuclear resource receiving a state-level credit through a Zero Emission Credit (“ZEC”) or other credit designed specifically to compensate the zero-emission benefits of a nuclear resource is not eligible to participate in this program.

² https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2020/2020-som-pjm-sec7.pdf, at P. 361.

³ Quad Cities and Clinton in Illinois; Hope Creek and Salem in New Jersey; R.E. Ginna, FitzPatrick, and Nine Mile Point in New York; and Millstone in Connecticut.

Maximize Transparency

For a nuclear resource to be eligible for the program, the discussion draft requires a resource to apply to the Secretary of Energy (“Secretary”). Several data points are proposed for consideration, including the average projected annual operating loss and operations and maintenance costs. To qualify, a resource must meet two minimum requirements: the Secretary must determine that the resource is projected to close due to “economic factors” and that its closure will result in increased pollutants.

To increase the transparency of the program and ensure program funds are appropriately allocated to resources that are in fact uneconomic and at risk of closure, all data submitted by the applicants should be publicly available. Additionally, the program should require an independent assessment to determine the accuracy of the submitted data. Additionally, the applicants should be required to obtain an affidavit from an independent entity certifying the data submitted and the claims made in the application are accurate and valid. We believe the IMM for the relevant competitive electricity market should be the entity designated to perform this oversight function. Draft legislative text is below.

Sec. 3203 (b)(2)(A)(ii)(III): NOTICE OF PUBLIC DATA

All contents of any application submitted are public and will be posted by the Secretary upon receipt.

Additionally (this option should be considered especially if confidentiality concerns prevent the public disclosure of application materials):

Sec. 3203 (b)(2)(A)(ii)(IV): INDEPENDENT CERTIFICATION OF APPLICATION

All applicants are required to obtain and submit an affidavit from the Independent Market Monitor for the competitive electricity market in which the resource is physically located and to which it is interconnected, demonstrating independent review and certification of expected economic losses over the course of the program. At a minimum, the affidavit must show the following: a) that the information submitted by the resource regarding all expected costs, prices, economic losses is accurate, and b) an independent analysis showing that the applicant’s resource has incurred losses over the past 2 years, is currently incurring losses, or is expected to incur losses over the four-year program period.

Once a nuclear resource is certified to participate in the program, it must then submit a sealed bid reflecting the price per megawatt-hour required to maintain operations over the four-year program period. While the discussion draft requires the Secretary to establish a process, along with other federal agencies, to “evaluate the bids through an auction process,” details on the auction process are otherwise minimal. For example, the price needed to “maintain operations” is highly subjective; asset owners may have the incentive to inflate this amount without adequate oversight, transforming the auction process into a “name your price tool” for nuclear owners. It is critical that independent oversight be extended to the auction process.

Sec. 3203 (e)(1)(C) INDEPENDENT OVERSIGHT OF AUCTION PROCESS

To ensure sealed bids submitted into the auction reflect the price needed to maintain operations, an independent entity, such as an independent market monitor, will provide

oversight of the auction process. The independent entity will review all submitted bids, as well as the original application, to ensure bid prices reflect the amount of money needed, as indicated in the application, to remain in operation. Following the auction, the independent entity will provide a report on the outcomes of the auction including the number of participants, the number of credits awarded (as well as total megawatts awarded a credit), and the dollar-per-megawatt-hour prices awarded to each recipient.

Minimum Requirements for Certification Should Include Strong Safety Record

An earlier version of Section 3203, proposed as Section 301 in the American Nuclear Infrastructure Act introduced in the last Congress, included, as a minimum requirement, that any nuclear resource applying to the program demonstrate a satisfactory safety record per Nuclear Regulatory Commission guidelines. It is unclear why Section 3203 removes this minimum requirement. Any program funds should be allocated only to the safest nuclear reactors. Therefore, we recommend reinserting the language from Section 301 of the American Nuclear Infrastructure Act, below:

Sec. 3203 (b)(2)(A)(i)(I): The nuclear reactor has a good safety record, as determined by the Action Matrix of the Commission or the Performance Indicators of the Reactor Oversight Process, such that the nuclear reactor falls under the “licensee response” column indicating no current significant safety issues.

Miscellaneous Questions/Points for Clarification

- **Sec. 3023 (a)(1)(A):** What is a “competitive electricity market”? Is it an Independent System Operator (ISO) or Regional Transmission Organization (RTO) region or state with a restructured electric sector? The latter makes more sense as vertically integrated states in RTO/ISO markets (e.g., SPP and MISO or Virginia, which is in PJM) already receive regulated cost recovery on those assets from the state, so there is no need for a federal credit.
- **Sec. 3203 (b)(1)(A)(i)(VI):** It is unclear why “operational and market risk” should be a consideration under the program. Operational and market risk is not unique to nuclear resources; all resources in a competitive market are subject to market risks. Under a cost-based program, such as the one proposed, market risk is eliminated (or greatly reduced), and therefore should not be recoverable. We propose eliminating this consideration from the application.
- **Sec. 3203 (d)(1)(B):** An eligibility requirement is that nuclear resources are in competitive markets, which are constantly re-dispatched to select the least cost set of resources to meet load. Therefore, how is it possible to commit to provide a specific number of megawatt-hours of generation during the four-year period?
 - Why does the current program allocate credits on a four-year basis? A previous version allocated credits on a two-year basis.
- **Requirement to offer plants for sale.** The draft should include a requirement for nuclear asset owners to offer their plants for sale before applying to the program. If the plants are truly uneconomic, no buyer will exist. However, if another entity can operate the plants more efficiently, that is a better outcome than a federal subsidy. Should a buyer exist, the

asset can be sold (assuming all regulatory burdens are met) and the asset is no longer a liability for the current owner.

EPSA appreciates the attention given by the Committee to energy infrastructure, and we look forward to working with the Committee going forward. We welcome the opportunity to work with the Committee to implement our recommendations outlined above. This concludes our written testimony.